

**IN THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1           1.       (previously presented) A method for improved inter-domain routing  
2 convergence, comprising:

3           transmitting reason information associated with a route update or withdraw,  
4 wherein the reason information comprises a reason for the route update or withdraw.

1           2.       (original) The method of claim 1, wherein said reason information is  
2 transmitted along with said route update or withdraw.

1           3.       (original) The method of claim 2, wherein said reason information is  
2 encoded as a triplet within a route update or withdraw message.

1           4.       (original) The method of claim 3, wherein said triplet comprises:  
2 a type code identifying the reason for the update or withdraw;  
3 an indication of a node pair associated with the update or withdraw; and  
4 an updated cost of a link between the node pair associated with the update or  
5 withdraw.

1           5.       (original) The method of claim 1, wherein said reason information  
2 comprises reasons selected from the group consisting of a loss of peering between nodes  
3 and a change in a cost of a link between nodes.

1           6.       (currently amended) The method of claim 1, wherein a node receiving said  
2 reason information uses said reason information to determine which of its candidate  
3 routes are also affected by ~~substantially~~ the same event that triggered the initial route  
4 update or withdraw and which of its candidate routes are not affected.

1           7.       (original) The method of claim 6, wherein a candidate route is considered  
2 as a transient route if said receiving node determines from said reason information that  
3 said candidate route is to be updated or withdrawn.

1           8.       (original) The method of claim 7, wherein said receiving node avoids  
2 advertising a candidate route considered as a transient route as a preferred route to its  
3 neighbors.

1           9.       (original) The method of claim 7, wherein a route previously considered as  
2 transient is considered as stable if the route is not updated within a predetermined time  
3 period.

1           10.      (original) The method of claim 1, further comprising transmitting version  
2 information for the route update or withdraw.

1           11.      (original) The method of claim 10, wherein said version information  
2 comprises a version of the update or withdraw for each node pair and the change in node  
3 pairs from a route previously advertised.

1           12.      (original) The method of claim 10, wherein a node receiving said version  
2 information uses said version information to determine the stability of its candidate routes.

1           13.      (original) The method of claim 12, wherein a candidate route is considered  
2 as a transient route if a reason's version is greater than the version of a corresponding  
3 node pair in a path of the candidate route being considered.

1           14.      (original) The method of claim 13, wherein said receiving node avoids  
2 advertising a candidate route considered as a transient route as a preferred route to its  
3 neighbors.

1           15. (previously presented) An apparatus for improved inter-domain routing  
2 convergence, comprising:

3           means for identifying reason information associated with a route update or  
4 withdraw, wherein the reason information comprises a reason for the route update or  
5 withdraw; and

6           means for transmitting the reason information to neighboring apparatuses.

1           16. (currently amended) The apparatus of claim 15, further comprising:

2           means for receiving reason information associated with a received update or  
3 withdraw; and

4           means for using said received reason information to determine which of its  
5 candidate routes are also affected by substantially the same event that triggered an initial  
6 route update or withdraw and which of its candidate routes are not affected.

1           17. (original) The apparatus of claim 16, wherein a candidate route is  
2 considered as a transient route if said apparatus determines from said received reason  
3 information that said candidate route is to be updated or withdrawn.

1           18. (original) The apparatus of claim 17, wherein said apparatus avoids  
2 advertising a candidate route considered as a transient route as a preferred route to its  
3 neighbors.

1           19. (previously presented) The apparatus of claim 15, further comprising:  
2           means for transmitting version information for the route update or withdraw.

1           20. (previously presented) The apparatus of claim 19, further comprising:  
2           means for receiving version information with an update or withdraw; and  
3           means for using said received version information to determine the stability of its  
4 candidate routes.

1           21. (original) The apparatus of claim 20, wherein a candidate route is  
2 considered as a transient route if said apparatus determines from said received version  
3 information that a reason's version is greater than the version of a corresponding node  
4 pair in a path of the candidate route being considered.

1           22. (original) The apparatus of claim 21, wherein said apparatus avoids  
2 advertising a candidate route considered as a transient route as a preferred route to its  
3 neighbors.

1           23. (currently amended) A communications network having improved inter-  
2 domain routing convergence, comprising:  
3           a plurality of network devices, each of said network devices comprising  
4 a processor and a memory, wherein said network devices perform the steps of:  
5           transmitting reason information associated with a route update or  
6 withdraw to neighboring devices, wherein the reason information comprises a  
7 reason for the route update or withdraw;  
8           receiving reason information associated with a received update or  
9 withdraw; and  
10          using said received reason information to determine which of its candidate  
11 routes are also affected by ~~substantially~~ the same event that triggered an initial  
12 route update or withdraw and which of its candidate routes are not affected.

1           24. (original) The communications network of claim 23, wherein a candidate  
2 route is considered as a transient route if a network device determines from said received  
3 reason information that said candidate route is to be updated or withdrawn.

1           25. (original) The communications network of claim 24, wherein said network  
2 devices avoid advertising a candidate route considered as a transient route as a preferred  
3 route to its neighbors.

1           26.   (previously presented) A computer-readable medium for storing a set of  
2 instructions, wherein when said set of instructions is executed by a processor perform a  
3 method comprising:

4           transmitting reason information associated with a route update or withdraw,  
5 wherein the reason information comprises a reason for the route update or withdraw.

1           27.   (currently amended) The computer-readable medium of claim 26, wherein  
2 said method further comprises:

3           receiving reason information associated with a received update or withdraw; and  
4           using said received reason information to determine which of its candidate routes  
5 are also affected by substantially the same event that triggered the initial route update or  
6 withdraw and which of its candidate routes are not affected.

1           28.   (original) The computer-readable medium of claim 27, wherein a  
2 candidate route is considered as a transient route if it is determined from said received  
3 reason information that said candidate route is to be updated or withdrawn.

1           29.   (original) The computer-readable medium of claim 28, wherein a  
2 candidate route considered as a transient route is avoided being advertised as a preferred  
3 route.